IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1. – 5. (Canceled).

6.   (Currently Amended) A method to provide a data management system, comprising:

  preprocessing a database having a relation to produce an index, wherein said preprocessing step comprises:

    identifying a dominating vector of constants, $\bar{c}\,'$, for a given n-dimensional vector of constants $\bar{c}$, wherein $\bar{c}\,'$ is formed by decreasing each coordinate of $\bar{c}$ by a fraction $1 + \varepsilon$, wherein ε is an approximation factor;

  receiving at a computer having a query optimization module a query having aggregation constraints, wherein said aggregation constraints are Optimization under Parametric Aggregation Constraints (OPACs);

  applying at said computer having said query optimization module said index to look up a result in response to said query having aggregation constraints; and

  providing said result, wherein said result is an approximation.

7.   (Original) The method of claim 6, wherein said preprocessing step further comprises:

  obtaining a partition defined by said vector $\bar{c}$ and said vector $\bar{c}\,'$.

8.   (Original) The method of claim 7, wherein said partition is expressed as a hyper rectangle.

9.   (Original) The method of claim 7, wherein said preprocessing step further comprises:

inserting said partition into a multidimensional data structure.

10.   (Original) The method of claim 9, wherein said multidimensional data structure is an R-Tree.

Claims 11. – 24. (Canceled).